Framework for Registration, Classification, and evaluation of errors in the Forensic DNA Typing Process

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of ineffective and effective root cause analysis will be presented. Attendees will learn the process of asking “why” five times to get to the source of the non-conformance. In addition, participants will learn why “blaming the individual” is missing the point of the root cause process.

Forensic specific examples provided will include contamination in postmortem drug analysis cases after incomplete cleaning of a blender carafe and the Federal Bureau of Investigation (FBI) laboratory’s review of compositional bullet lead analyses cases. These examples will demonstrate how a thorough root cause analysis benefits the laboratory organization, the laboratory employees, and the laboratory customers.

Root cause analysis is a skill that must be learned, a process that requires continuous improvement, and a process that will require resources. It’s too costly, some might say. Are you willing to accept the risk of not doing root cause analysis well?

“A bad system will beat a good person every time.” ~W. Edwards Deming

Root Cause Analysis, Continuous Improvement, Corrective Action

W13 Framework for Registration, Classification, and Evaluation of Errors in the Forensic DNA Typing Process

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The goals of this workshop are to encourage participants to accurately and truthfully record and document quality issues in their own forensic DNA laboratory and to teach attendees how to deal with such issues in the context of a case. A proper way to deal with errors is an essential tool to further improve on everyday forensic practice.

This presentation will impact the forensic science community by explaining how the precise magnitude of the error rate in forensic DNA typing is difficult to estimate, with the principal reason being the lack of a universally accepted definition of error in the professional society of forensic DNA typing laboratories. The Netherlands Forensic Institute (NFI) has developed a comprehensive framework that allows for the classification, registration, and evaluation of errors in the forensic DNA typing process. In relation to the analysis of biological samples, the NFI has defined “internal quality issue notification” as any event that can lead to a failure or diminished quality of the analysis. These internal quality issue notifications have been benchmarked and evaluated using actual workload data from the department of Human Biological Traces of the NFI (over 400,000 DNA analyses) in the period 2008-2012.

This workshop will share data and the outcome of evaluations with the forensic community.

After attending this workshop, attendees will understand: (1) when an “internal quality issue notification” is made; (2) how an “internal quality issue notification” is made; (3) how “quality issue notifications” are assessed and evaluated; (4) how this can be used for benchmarking and process improvement; (5) how quality issue notifications are graded by potential impact and actual impact; (6) when and how the judicial system is informed; (7) when and how the public is informed; and, (8) how to deal with error rates in the context of a specific case.

References:
2. www.qualityonline.com

Error Rates, DNA, Laboratory Management

W14 Postmortem Monocular Indirect Ophthalmoscopy

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The goals of this presentation are to: (1) differentiate between direct and indirect ophthalmoscopy, noting advantages and limitations of each technique for the postmortem detection of fundal hemorrhages; (2) discuss the fundal location of retinal hemorrhages relative to their projected aerial image during monocular indirect ophthalmoscopy; and, (3) on a fundal diagram,